

Amendments to the Drawings

The attached sheets of drawings include changes to FIGS. 2A-2B and 3A-3B. These sheets replaces the original sheets including FIGS. 2A-2B and 3A-3B.

In FIGS. 2A-2B, previous reference numeral 50 has been changed to reference numeral 49.

In FIG. 3A, previous reference numeral 28 has been deleted, as suggested by the Examiner.

In FIG. 3B, previous reference numeral 62 has been changed to reference numeral 73, and previous reference numeral 73 has been changed to reference numeral 74, as suggested by the Examiner.

Attachments: Replacement Sheet
 Annotated Sheet Showing Changes

REMARKS/ARGUMENTS

I. Summary of the Office Action

Claims 39-58 are pending in the application.

The formal drawings filed on June 25, 2004 have been objected to by the Examiner.

Claim 39 has been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,511,237 to Jaeger (hereinafter "Jaeger") in view of U.S. Patent No. 406,247 to Webb (hereinafter "Webb") and U.S. Patent No. 2,164,047 to Baumann (hereinafter "Baumann").

Claim 40 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Jaeger in view of Webb and Baumann, and further in view of U.S. Patent No. 5,450,750 to Abler (hereinafter "Abler").

Claims 41 and 42 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Webb and Baumann, and further in view of U.S. Patent No. 5,727,289 to Reder (hereinafter "Reder") and U.S. Patent No. 2,930,074 to Marks (hereinafter "Marks").

Claim 46 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Webb and Baumann, and further in view of "A New Air Displacement Method for the Determination of Human Body Composition" to Dempster et al. (hereinafter "Dempster").

Claims 49 and 53 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Dempster and U.S. Patent No. 4,915,431 to Bailey (hereinafter "Bailey").

Claim 52 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Dempster and Bailey, and further in view of Abler.

Claims 54 and 55 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Dempster and Bailey, and further in view of Webb, Baumann, Reder and Marks.

Claims 43-45, 47-48, 50-51 and 56-58 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

II. Summary of Examiner Interview

First, the undersigned thanks the Examiner for his time during the Examiner interview on November 2, 2004, and a follow-up phone call on November 4, 2004. During those conversations, the undersigned and Examiner discussed independent claims 39 and 49.

With respect to claim 49, the undersigned explained that the "lateral movement" permitted in a closed position of FIG. 3B was in a direction "into and out of the page" and/or "up and down on the page."

By contrast, it was noted that the Bailey reference cited showed movement in a direction orthogonal to applicants'

directions, i.e., Bailey disclosed movement "to the left and right on the page." The Examiner appears to understand the direction of applicants' "lateral movement." However, the Examiner contended that some previously-known, conventional magnetic latches may permit some incidental lateral movement. More specifically, when such conventional magnetic latches are not rigidly hinged, the Examiner contends that some slipping between the magnetic members may take place.

The Examiner and the undersigned discussed a few possible amendments verbally, but did not reach an agreement regarding specific claim amendments to claim 49.

Similarly, with respect to claim 39, some proposed claim amendments were discussed verbally, but no agreement was reached regarding specific claim amendments.

III. Summary of Applicants' Reply

Claims 39 and 49 have been amended for the reasons advanced hereinbelow. No new matter has been added by these amendments.

The Examiner's rejections are respectfully traversed.

Reconsideration of this application in light of the following remarks is respectfully requested.

IV. Reply to the Objections to the Drawings

The Examiner has objected to the formal drawings due to minor informalities not previously noticed.

With respect to FIGS. 2A-2B, previous reference numeral 50 has been changed to reference numeral 49. Further, two passages in the specification have been amended to recite "contact member 49" instead of "contact point 50."

Support for this terminology change can be found throughout applicants' specification. For example, the originally-filed specification recited: "In the preferred embodiment, **contact point 50** is a roller bearing mounted on hinge pin 46." (page 9, lines 4-5; emphasis added). Applicants submit that it is appropriate to change "contact point 50" to "contact member 49," since a roller bearing is a preferred form of a contact member.

It should be noted that applicants have left one recitation of "contact point 50" in the specification; specifically, at page 9, line 3. Accordingly, the amended specification recites that **contact point 50 is a point at which contact member 49 contacts spacer 48.** (see FIG. 2B). Applicants respectfully submit that no new matter has been entered, and that the Examiner enter the changes to the drawing and specification, as they relate to FIGS. 2A-2B.

With respect to FIG. 3A, previous reference numeral 28 has been deleted, as suggested by the Examiner.

With respect to FIG. 3B, previous reference numeral 62 has been changed to reference numeral 73, and previous reference numeral 73 has changed to reference numeral 74, as suggested by the Examiner.

Applicants respectfully submit that the above-mentioned amendments to the drawings and specification overcome each of the Examiner's objections.

Applicants therefore respectfully request that the objections to the drawings be withdrawn.

V. Reply to the Objections to the Claims

The Examiner objected to the use of the word "facilitates" in the context of previously-presented claim 39.

Applicants have amended claim 39, as set forth hereinabove, and the word "facilitates" has been omitted from the amended claim. Accordingly, the Examiner's objection to claim 39 has been obviated.

VI. Applicants' Response to the Rejections Under 35 U.S.C. §103(a)

The Examiner rejected claim 39 under 35 U.S.C. 103(a) as being unpatentable over Jaeger in view of Webb and Baumann. The Examiner claims that Jaeger teaches a plethysmograph, while Webb teaches a dual-articulating hinge. The Examiner further contends that Baumann teaches a hinge that would "allow the entire door to open clear of the chamber ... thus ensuring that large items that

are placed in the chamber do not hit and damage the door." (See Final Office Action at page 14).

Applicants have amended claim 39, and respectfully request that the Examiner's rejection of claim 39 be withdrawn.

Applicants have amended claim 39 to recite that the dual articulating hinge comprises a first hinge leaf, a second hinge leaf, and at least one spacer. Further, **"the spacer defines a set distance between said first hinge leaf and said second hinge leaf, to repeatedly define a predetermined clearance between said chamber door and said chamber wall in a closed position."** Support for this amendment may be found in applications' specification (see, e.g., page 8, line 20 - page 9, line 3 and FIG. 2B).

Applicants respectfully submit that the amendments to claim 39 overcome the previously-imposed 35 U.S.C. 103(a) rejection.

None of the references previously cited by Examiner comprise a spacer that **"defines a set distance between said first hinge leaf and said second hinge leaf, to repeatedly define a predetermined clearance between said chamber door and said chamber wall in a closed position."** (Applicants' amended independent claim 39).

When applicants' "spacer" limitation was previously recited in a different context in original claim 41, the Examiner

cited Jaeger, Webb and Baumann as applied to original claim 39, and further cited Reder and Marks to reject original claim 41.

With respect to original claim 41, the Examiner wrote:

Jaeger in view of Webb and Baumann teaches that it is known to use a dual articulating hinge on a chamber. Jaeger in view of Webb and Baumann does not teach the use of a spacer for defining a set distance between the first leaf and the second leaf.

(Final Office Action dated 8-20-04 at page 15). The Examiner further stated that it would have been obvious to modify the teachings of these three references "with the teachings of Reder and Marks to provide a spacer and a bearing surface on the leaves of a hinge to allow one to control the distance that a door swings when it closes." (*Id.* at page 17).

Reder teaches an invention comprising "a pair of stop elements that can be mounted to an existing door hinge to limit the maximum opening of the door." (Reder at col. 1, lines 28-30). Indeed, the Examiner notes that adjustable screws 376 of Reder may adjust and limit the maximum angular opening of the door (see, e.g., Reder specification at col. 5, lines 44-58 and Final Office Action at page 16).

Accordingly, Reder **teaches away** from applicants' presently-amended claim 39 by teaching a hinge comprising a single hinge pin, as well as apparatus configured to limit opening of a door. Indeed, Examiner states that Reder's invention "would allow

the user to control or otherwise maintain the door **in an open position.**" (See Final Office Action at page 16).

By contrast, applicants' amended claim 39 teaches a spacer used to define a predetermined clearance between a chamber door and a chamber wall **in a closed position.**

Further, it should be noted that when door 24 of applicants' invention contacts spacer 48, dual-articulating hinge 26 begins its secondary "articulation," i.e., by compressing spring 56 and rotating about hinge pin 46. (see, e.g., applicants' specification at page 9, lines 4-26). At this point, door 24 continues to close until first latch member 60 contacts second latch member 62. Accordingly, unlike Reder's invention, spacer 48 of applicants' invention does not limit the distance that door 24 swings when it opens or closes.

Rather, spacer 48 defines a gap between the first and second hinge leaves, as recited by amended claim 39. Further, the spacer defines a predetermined clearance between the chamber door and the chamber wall, as recited by claim 39, also. However, the spacer does not limit the distance that door 24 swings when it opens or closes; it is first latch member 60 and second latch member 62 that define the distance the door swings.

Applicants therefore submit that it would not have been obvious to use the Reder invention, which limits the angular opening of the door in an open position, in applicants' invention

to define a specific, predetermined clearance between the chamber door and the chamber wall in the closed position.

Like the Reder reference, the Marks reference also **teaches away** from applicants' amended claim 39.

First, the Examiner contends that reference item 20 in the Marks patent is a "spacer," and further contends that "Attaching the screws of Reder to the second leaf would, in view of the teachings of Marks, allow one to control the amount of closing of the door." (Final Office Action at page 16).

The Examiners contentions are respectfully traversed.

First, reference item 20 of the Marks patent cannot be interpreted as a "spacer," even under a broad interpretation of the word "spacer." As Marks recites:

The leaf 10 has an elongated opening 25 adapted to receive the pressure bar 20 when the hinge is in a closed position. This arrangement permits the surfaces of the **leaves 10 and 11 to lay flat in relation to each other**, thereby permitting a door D, for example, on which it used, to be completely closed. Although Fig. 5 shows the door D and the frame F not quite closed, it is apparent that the **hinge leaves 10 and 11 are adapted to bear against each other in the closed position.**"

(See Marks specification at col. 2, lines 56-64; emphasis added.)

Indeed, as shown in FIG. 5 of the Marks patent, pressure bar 20 is received in elongated opening 25, thereby causing leaves 10 and 11 to lay flat with respect to each other. Pressure bar 20 is not a spacer, as Examiner contends, because there is no spacing between leaves 10 and 11.

Even assuming, *arguendo*, that reference item 20 of Marks can be construed as a spacer, which applicants contend that it is not, the alleged spacer 20 of Marks still does not "repeatedly define a **predetermined clearance between said chamber door and said chamber wall in a closed position,**" as required by applicants' amended claim 39.

Indeed, applicants are not aware of, and Examiner has not cited, any references that teach or suggest a spacer that defines a set distance between said first hinge leaf and said second hinge leaf, to repeatedly define a predetermined clearance between a chamber door and a chamber wall **in a closed position.**

Finally, applicants respectfully submit that there is no suggestion in the references cited to combine references to create applicants' invention of amended claim 39. Even assuming, *arguendo*, that there is some suggestion in the art to combine references, which applicants respectfully traverse, then the Examiner fails to meet the second requirement for a *prima facie* case of obviousness, namely, a reasonable expectation of success.

Specifically, it would be unclear how the references cited could be combined to teach such a chamber, "**wherein the spacer defines a set distance between said first hinge leaf and said second hinge leaf, to repeatedly define a predetermined clearance between said chamber door and said chamber wall in a closed position.**"

For at least the reasons set forth above, applicants respectfully submit that presently-amended independent claim 39 is in condition for allowance. Since the rejection to independent claim 39 is in error, applicants respectfully submit that dependent claims 40-48, which depend from claim 39, also are in condition for allowance.

Further, new claims 77-79, which depend from claim 39, also are in condition for allowance for at least the reasons set forth above with respect to independent claim 39. Support for newly added claims 77-79 may be found, for example, at page 8, lines 20-31 and FIG. 2B.

The Examiner has rejected claim 49 under 35 U.S.C. 103(a) as unpatentable over Jaeger in view of Dempster and Bailey. The Examiner contends that Jaeger teaches a plethysmograph, Dempster teaches an electromagnetic latch in a plethysmographic chamber, and Bailey teaches a laterally compliant electromagnetic latch assembly.

Applicants have amended claim 49, and submit that the Examiner's rejection of claim 49 is respectfully traversed.

Applicants have amended claim 49 to recite that the magnetic latch comprises **"at least one roller ball coupled to said chamber wall, and at least one substantially flat magnetic member coupled to said chamber door, wherein said roller ball contacts**

said substantially flat magnetic member in the closed position."

Support for such an amendment may be found in applicants' specification, for example, with respect to FIGS. 3A-3B. In one embodiment, the substantially flat magnetic member may comprise insert plate 78, as shown in FIG. 3B.

As explained in applicants' specification, roller ball 66, which is part of first latch member 60, is configured to rotate with respect to insert plate 78, which is part of second latch member 62. Since first and second latch members 60 and 62 only make contact where roller ball 66 makes contact with insert plate 78, various stresses and strains may be reduced. (see, e.g., applicants' specification at page 12, lines 15-32).

Indeed, Examiner had allowed original claims 47 and 50, which included the roller ball limitation, albeit with additional limitations not currently included in independent claim 49. However, applicants respectfully submit that newly-amended claim 49 also is deemed to be in condition for allowance.

Further, applicants have added new dependent claims 80-81, which depend from claim 49. Applicants respectfully submit that claims 80-81 are in condition for allowance for at least the reasons set forth above with respect to claim 49.

Support for newly-added dependent claims 80-81 can be found throughout applicants' specification, e.g., at page 12, lines 15-32.

Further, newly-added dependent claim 81 recites that "movement of said substantially flat magnetic member coupled to said chamber door is permitted in any lateral direction, excluding a dimension in which said chamber door would move away from said chamber wall to cause said roller ball to no longer contact said substantially flat magnetic member."

As applicants made clear during the November 2, 2004 Examiner interview, and the follow-up call on November 4, 2004, the two-dimensional movement permitted in the closed position of FIG. 3B was in a direction "up and down on the page" and/or "into and out of the page." Such movements are those permitted in claim 81.

By contrast, the Bailey reference shows movement in an orthogonal direction, i.e., "to the left and right on the page" and for purposes of facilitating opening of the door, as previously explained by applicants (see, e.g., pages 19-21 of applicants' "Reply to Office Action," filed June 25, 2004). Such movement is expressly prohibited by applicants' claim 81. Regardless, dependent claims 80-81 necessarily must be allowable over Bailey because the Bailey reference does not teach a roller ball that rotates to cause movement of a substantially flat magnetic member in a closed position.

With respect to newly-added independent claim 82, this claim is substantially similar to amended claim 49, as described

hereinabove, but requires that the roller ball be coupled to the chamber door (instead of the wall, as in claim 49), and the substantially flat magnetic member be coupled to the chamber wall (instead of the door, as in claim 49). Accordingly, applicants respectfully submit that independent claim 82, like claim 49, is in condition for allowance.

With respect to the dependent claims rejected in the Final Office Action, and not specifically addressed hereinabove, applicants submit that because amended independent claims 39 and 49 are in condition for allowance, then dependent claims 40-48, 50-58 and 77-81 are allowable for at least the reasons described hereinabove. Accordingly, applicants submit that the rejections are in error and should be withdrawn.

VII. Conclusion

In view of the foregoing, applicants respectfully submit that this application, including each of claims 39-58 and 77-82, is in condition for allowance.

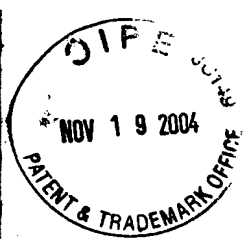
Reconsideration and allowance of this application is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Douglas A. Oguss', is written over a horizontal line.

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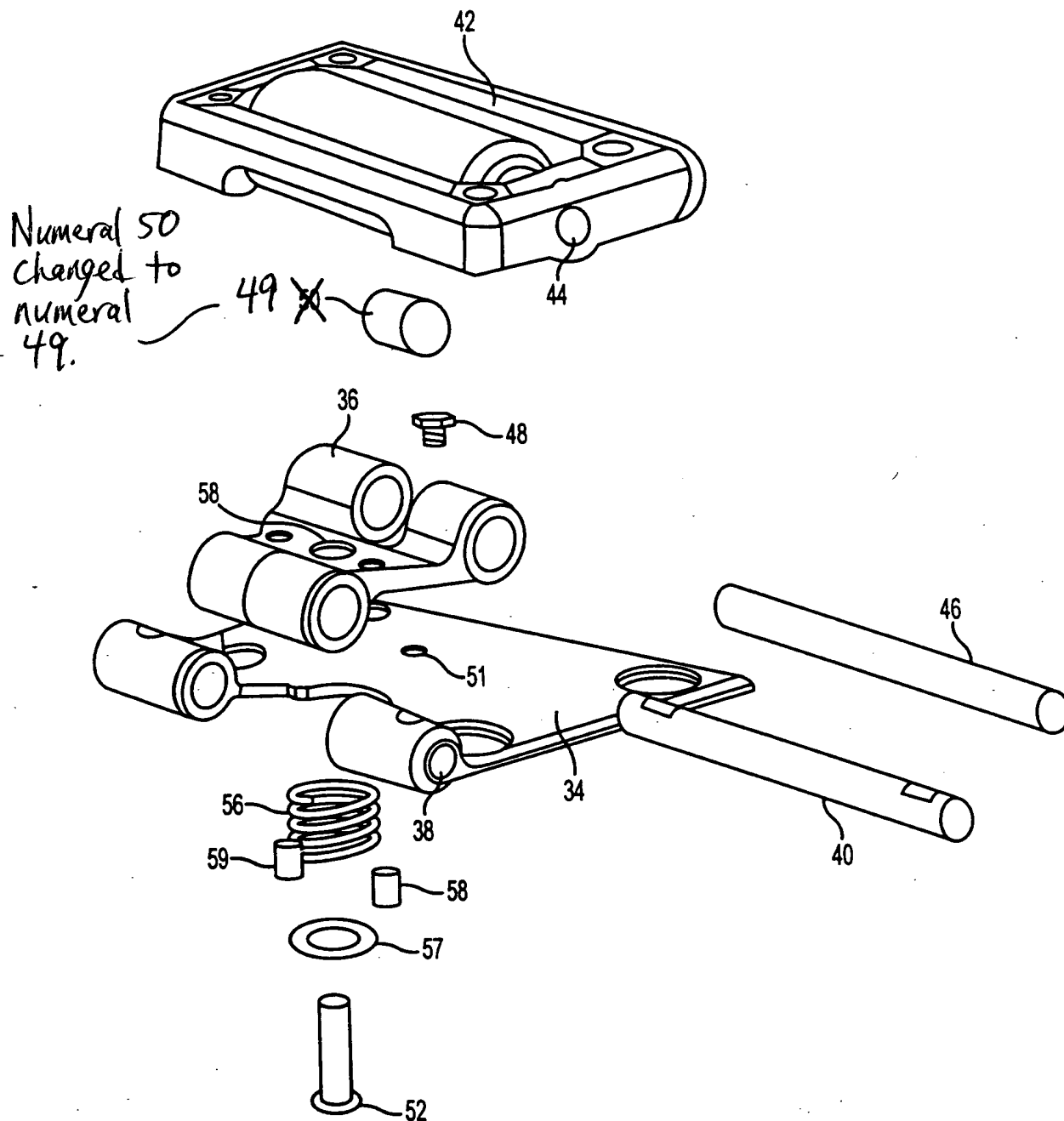


FIG. 2A

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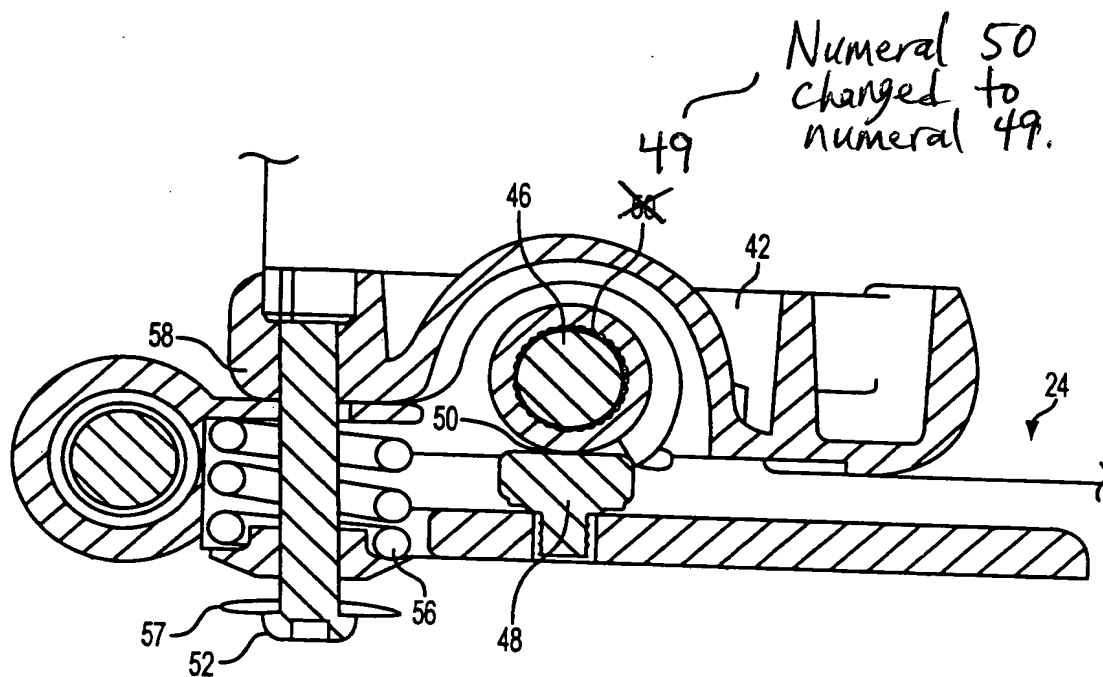


FIG. 2B

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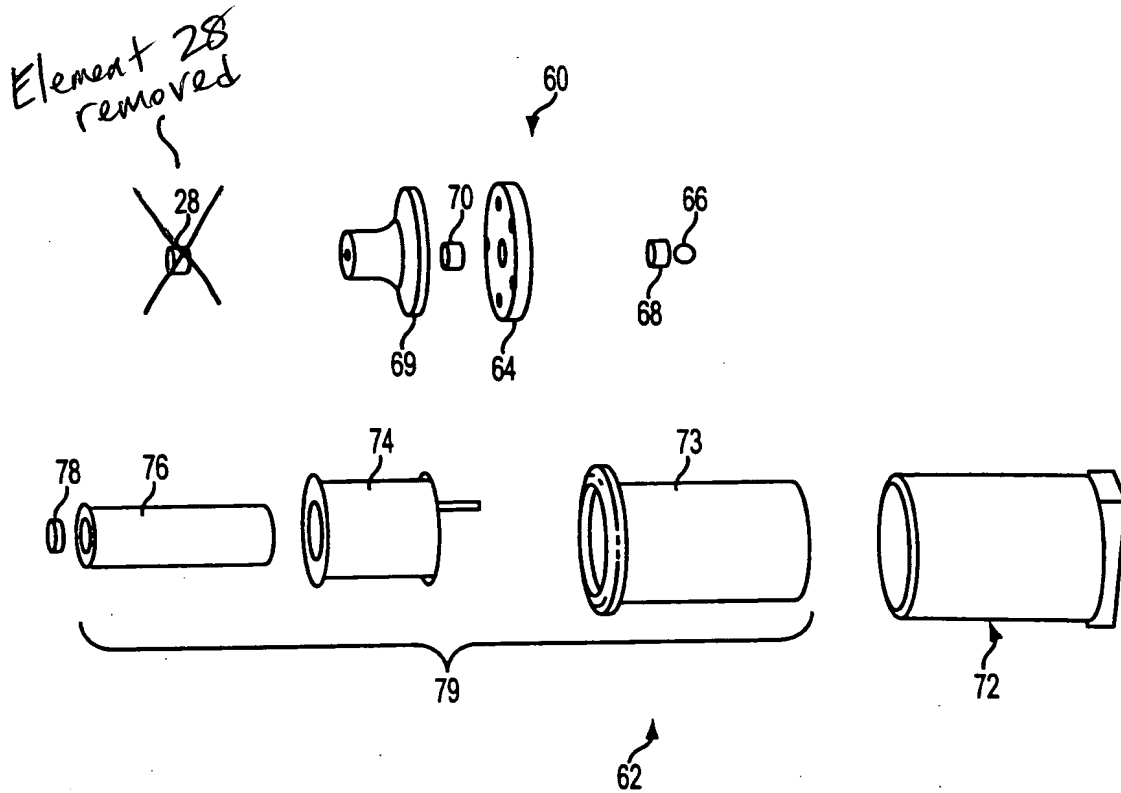


FIG. 3A

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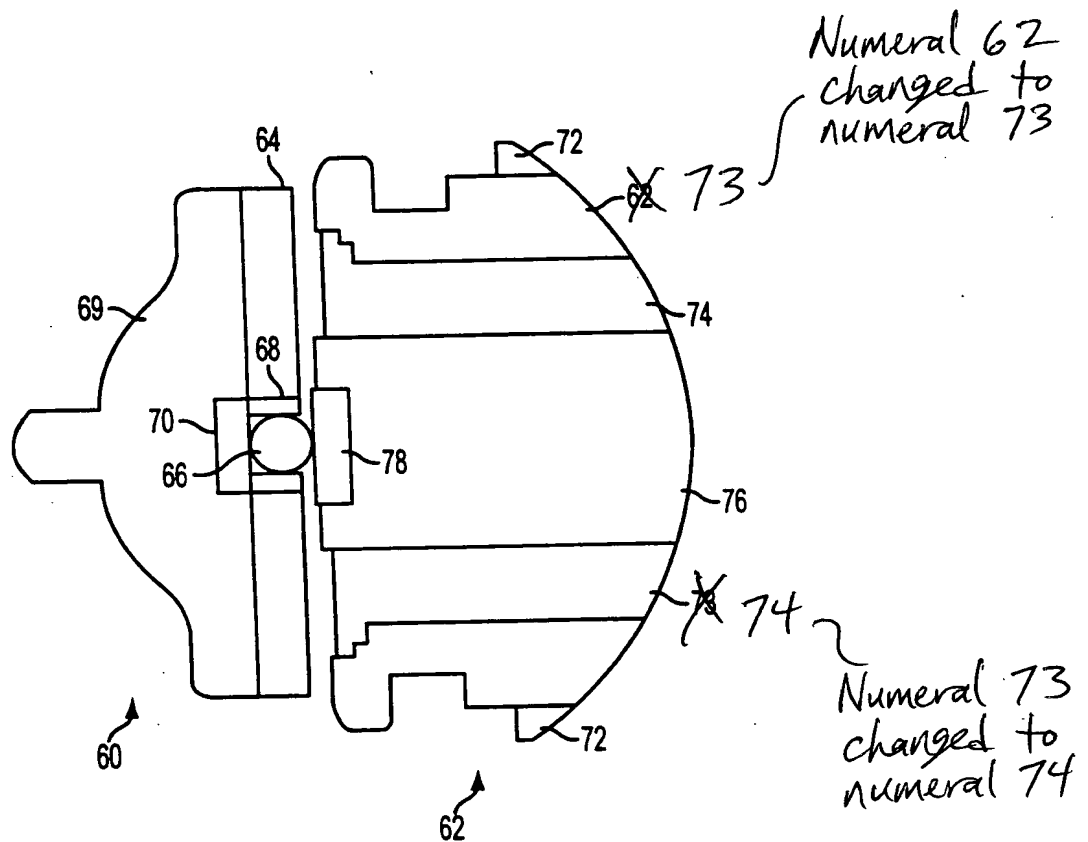


FIG. 3B